

Minutes: 3D Geomatics Committee Hydrography Workgroup

Date: 3/12/2019
 Time: 10:00 a.m. – 11:00 a.m.
 Location: Skype online meeting



I. Attendance | Hydrography Workgroup

Accountable: ~~Ann Banitt~~ (ACOE); ~~Andrea Bergman~~ (MNIT@DNR); ~~Jen Crea~~ (MNIT@MPCA); ~~Matt Drewitz~~ (MNIT@BWSR); ~~Tyler Grupa~~ (MNSU-WRC); ~~Tom Hollenhorst~~ (EPA); ~~Brandon Krumwiede~~ (NOAA Affiliate); ~~Rick Moore~~ (MNIT@DNR); ~~Christiane Roy~~ (USDA-NRCS); ~~Kiah Sagami~~ (HEI); ~~Jamie Schulz~~ (MNIT@DNR); ~~Sean Vaughn~~ (MNIT@DNR)

Informed: ~~Lyn Bergquist~~ (MNIT@DNR); ~~Joe Brennan~~ (USDA-NRCS); ~~Whitney DeLong~~ (UMN); ~~Chuck Fritz~~ (IWI); ~~Ben Gosack~~ (DNR-EWR); ~~Kevin Hanson~~ (ACOE); ~~Keri Hedin~~ (Fond du Lac); ~~Brian Huberty~~ (USFWS); ~~Alan Laumeyer~~ (Goodhue Co); ~~Rick Lorenzen~~ (MNIT@DNR); ~~Grit May~~ (IWI); ~~Joel Nelson~~ (UMN); ~~Doug Norris~~ (DNR-EWR); ~~Jill Pohjonen~~ (DNR-EWR); ~~Ben Richason~~ (SCSU); ~~Casey Scott~~ (MPCA); ~~Aaron Spence~~ (BWSR); ~~Angus Vaughan~~ (MPCA); ~~Barbara Weisman~~ (DNR-EWR); ~~Andy Williquett~~ (MNIT@DNR)

3D Steering Committee Members: ~~Gerry Sjerven, Clint Little~~

II. Welcome and Agenda Review

Any agenda additions?

III. Homework Reminders (10 min)

- Vote on updated workgroup name as outlined in supplementary meeting document (workgroup_name)
 - a) 3D Hydromorphology Workgroup
 - b) 3D Hydrogeomorphology Workgroup
 - c) Landforms | Geography, Hydrography, and Soils
 - d) 3D Landforms | Geography, Hydrography, and Soils
- Matt – do we want to include the Gridded Surface Subsurface Hydrologic Analysis (GSSHA) model along with the other models listed in the workgroup_name document?

- Clint – wondering if 3D is redundant since it is under the 3D Geomatics Steering Committee
 - Whitney – agrees
 - Andrea – wondering if other workgroups have 3D as part of their names?
 - Sean – yes
 - Sean – 3D is used everywhere if you look online at conferences etc.
 - Referencing the relationship to the point cloud and what you are mapping
 - Andrea – leave as is – save consistency
 - Whitney agrees that consistency is good
- Results – tally includes votes in poll and votes from people not attending as of 3/12/2019

Proposed Name	Votes
a) 3D Hydromorphology Workgroup	2
b) 3D Hydrogeomorphology Workgroup	7
c) Landforms Geography, Hydrography, and Soils	2
d) 3D Landforms Geography, Hydrography, and Soils	3

IV. Current Projects of Interest (10 min) – Sean Vaughn (MNIT@DNR)

- 3D Geomatics Steering Team update
 - Updates
 - Members need to reach out to coworkers about membership in this group or in other 3D Geomatics groups
 - Working with Nancy Rader to update web pages
 - Dropdown menu shows committees and workgroups and to the subgroup
 - Diagram of 3D Geo Committee will be updated
 - Formation of Acquisition and Education Workgroups
 - Education Workgroup – Chair Joel Nelson, UMN
 - New training out there on the web page
 - Announcements have come out through GIS/LIS consortium
 - Draft work plan has been written along with a mission statement
 - Need members – share this with anyone who may be interested
 - 3D Data Acquisition & Sensing
 - Dan Ross asked about dropping “& Sensing”
 - The Exec Steering Team will look at that
 - Have a work plan and mission statement
 - Building out membership – share with anyone who may be interested
 - Writing a statewide acquisition plan
 - Workgroup will provide guidance for writing the plan
 - Alison Slaats of MNGEO is committed to writing the plan

- Andrea – what we are doing as a workgroup will help feed into the acquisition plan
 - Package up what we need in the hydro community so that requirements can be met for 3D data acquisition to provide hydrography products
 - Sean – most people do not use the 3D data directly, they use derived products
 - This group here has a consortium of SME directly tied to many of those derived products
 - Contours – used all the time. #1 usage of derived products in the state. Many users do not know they come from LiDAR.
 - If we have an improved bare earth DEM, then we have better ability to create more detailed and accurate hydrography products
 - Brandon – greater point density has the potential to introduce many more digital dams into the data. In terms of usability, the processes to create a usable data source will increase.
 - Sean – good reminder. Many people look at cost. If we get new LiDAR tomorrow, chances are good we won't have anything else for at least a decade.
 - Be prepared for the future and future expectations
 - Accurate modelling needs of the future
 - Brandon
 - Example of a flat DEM when in reality it is pocked with depressions is a good one
 - Time and data itself as a resource – good to keep in mind requirements
 - Collection along the North Shore
 - Still in processing 6 months later
 - Greater detail, need to sort out the noise from meaningful data
 - Challenge is having people who can get through the data to extract out the meaningful data
 - Time is the piece people don't know about or account for
 - High level of detail is what users are calling for
- Next meeting: April – **Volunteer?**

VI. GAC Presentation (5 min)

- March 6th presentation to the GAC by the Hydro Workgroup Chairs and Liaison
- 1-page Handout prepared for this meeting
 - Jamie – the Co-chairs and Steering team liaison attended the meeting and presented an overview of the workgroup and the work we have been doing. A 1-page handout was shared with GAC members. That [handout](#) is available on the workgroup website and was sent out in an email with today's meeting agenda

VII. Subgroup Reports (10 min) – deferred due to time limitations

- Data Catalog update – Jamie

- Breachline Subgroup updates – Rick

V. ACPF and PTMApp Discussion (25 min)

- **Homework:** Prepare questions/comments for discussion on ACPF and PTMApp
- Dedicated our [November](#) and [December](#) meetings to these topics
- Wanted to wait for both presentations to have a discussion
- How does Chuck’s question that has been waiting in the lobby fit in?
 - Brandon - in the great lakes areas, updates to the FEMA flood maps are going on
 - Using the best available elevation data possible
 - If not careful about how that data is processed, mapped, or modelled, you could be causing people to buy flood insurance when they don’t need it
 - Homeowners – ask “how did you decide that now I need to buy flood insurance?”
 - An example of the “so what” in Chuck’s question
 - Clint – flood zone mapping in Cook County (FEMA)
 - Working with Suzanne Jiwani
 - Look at structures at risk – need a structure inventory
 - Importance of whether or not a home is in the floodplain is something that will be looked at – flood insurance requirements
 - Matt – ACPF and PTMApp tool do not work well in the northern forested landscape
 - Talked with Brian Gelder about this
 - The wet model in ACPF may work in this type of landscape
 - Will never address the urban landscape well
 - May happen down the road – not a priority as the tool is used mainly in Iowa – lack of forested areas
 - Clint – recalled that Erin Loeffler approached him about using PTMApp in the forested landscape – need to reconnect to see if she was able to get it to work
 - Matt has worked with her on this
- How many have used ACPF toolbox in the group?
 - 4 – Yes, 6 – No
- How many have used the PTMApp toolbox in the group
 - 3 – Yes, 7 – No
- Rick: Data creators, and the data users. Are there more people using the data than those that actually create it?
 - Matt – been looking at that information
 - Looking for people who can run the model and understand the process
 - People then take the data and create the end products
 - The former group will be smaller than the latter
 - Provide more in-depth training and offering certification on running the tool? Possibility
 - Video modules or training on using the output data products. Give better guidance on using the data

- Web app – another use that of the data
 - ACPF web page provides some videos and training modules, but doesn't provide in-person training
 - Some of the head people are retiring soon
- Kiah – trying to get more training. End user products and knowing what to do with it is a struggle. Where training is concentrating.
 - Actual data creation requires knowledge that is pretty targeted
 - Need to be GIS savvy to use the tools
 - Would like to have different regions that have a go-to person who could support users in that area
 - In the process of figuring out what the best way to do this would be
- Clint – Mitch Brinks would be a good resource
 - End users of model outputs, important that they understand more about the data and what was used to create the data. Understand that the statewide LiDAR collect is the source data – often don't know and cannot relate how a new collect would benefit them.
 - Kiah – agrees. Makes a point of educating people about this at training
 - Good to understand that the data that goes in is important – a good model doesn't improve the quality of the data
 - What is the best way to educate people on what the base data really is and what that means in the end products
 - Matt – working with Mitch
 - Advisory committee for PTMApp – he is on it
 - Will be following up with him
- Christiane - In my experience with SWCD and NRCS field staff in MN, is that the question they ask is 'when' is the new LiDAR collect.
- Rick – there is a collection of people who feel that new LiDAR is important, and sharing this information and recording as minutes is building a library of the need for the data
 - Matt – project mapping BMPs based on LiDAR
 - Structural projects done often don't show up because they were done after the LiDAR collect – important to note
 - Change over time – new LiDAR is very important
 - Sean – if people can send in why they would like to see new LiDAR for the state of MN, send it in. Would be helpful in the discussion about LiDAR acquisition

Next meeting – continue discussion?

Future Meetings

Date: 4/9/2019

Time: 10:00 a.m. – 11:00 a.m.

Location: Skype online meeting

Agenda items: (submit proposed agenda items to [Jamie Schulz](#))

Future Items for Discussion (Waiting in the “lobby” for the appropriate time)

Chuck Fritz (IWI): Those of us with knowledge of LIDAR - hDEM creation understand the subtle fine – scale editing issued just discussed. What we don't yet have is the "so what" descriptor. What are the resulting implications (e.g. PTMApp data output) for neglecting due diligence?